F.A. BERNHARDT GMBH

Teletext & Subtitling Products Group

Teletext Data Generator FT-DGS 2.5

Teletext Data Generator FT-DGS 2.5 Operation

Table of contents

Introduction

Main features of the FAB Teletext Data Generator
FT-DGS 2.5 Series

This manual describes the way of working with the FAB Teletext Data Generator. As some actions are performed automatically by the system make sure you read the Automatic Actions section to prevent any loss of data.

The Commands section describes all the commands that can be used from any Teletext Editing Terminal. Many commands can be used for different powerful actions to enable easy use of the system, so it can be very useful to know and understand all commands.

And at the end the Error Messages section describes all possible error messages and the cause for their appearance.

To be able to understand the FAB Teletext Data Generator completely also read the Installation & Configuration manual. That one describes possible configurations of the system and describes the internals of the FAB Teletext System.

The Teletext System

The FAB Teletext System consists of the Data Generator and Teletext Editing Terminals. The terminals can communicate with the Data Generator where pages are stored to a built-in hard disk and can be transmitted as selected.

The Editing terminals can issue commands which the Data Generator has to execute. When a command is executed, the confirmation appears on the terminal. When the command is not executed, an error message appears. This way of operation is not only used by the FAB Teletext system bur also by some of the most powerful database systems like SQL.

The pages on the hard disk are stored in the same way as they are transmitted. They are numbered from 000 to 999, but only pages from 100 to 899 can be transmitted. The other 200 pages can only be used for storing of pages. In addition there are pages available which are defined in the teletext specification as hexadecimal pages. These pages have

hexadecimal page numbers from 10A to 1FF, 20A to 2FF up to 80A to 8FF.

Each page can consist of up to 8000 subpages. The subpages are rotating automatically when they are transmitted. Also rotating pages are automatically numbered in the right upper corner when transmitted. Every rotating page can only be transmitted with all of its subpages. It is not possible to transmit only some subpages of a rotating page (See GET, PUT, INS and RUN commands).

All pages from 000 to 999 can be named by the NAM command. Every name can consist of up to 12 characters and is automatically used in transmission of the TOP system.

Pages can also be stored under text names in a directory structure by using the PUT command. It is also possible to access pages that are transmitted under a text name. See the LNK command for details.

All pages that are transmitted are automatically stored in a special archive when their transmission is invoked. The archive provides storage for as many days as there is space on the hard disk. The oldest archive will be deleted only when there is no more space for the archive of the current day, Together with the page additional information is also stored. See the ARC command for more information.

When a Stand-by system is connected to the Data Generator all commands that are executed on the main system are also executed on the Stand-by system so that when the main system fails the transmission can automatically be continued from the Stand-by system.

The time commands can be used for automatic execution of commands at specific times on specific days. See the command TMC for more information.

Each user of the system has to register when he starts using the Data Generator. Since each user can have a different priority, he can only use the commands corresponding to his priority. See REG and LOG commands for more information.
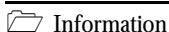
Important Commands

This section lists some most important commands of the FAB Teletext Data Generator. You will find a detailed description of each command in the Commands section of this manual.

Commands for daily use

Command	Description
GET	Reads a page from the database
GER	Reads a page from transmission memory
PUT	Stores a page into the database
INS	Stores a page into the database and puts the page into transmission
RUN	Puts a page which is stored in the database into transmission
STO	Stops transmission of a page.
REG	Enables a user to login into the system
LOG	Logs the user out of the system
DIR	Displays a list of pages that are stored in the database
DRI	Displays a list of pages that are stored in the directory structure of the database
CLR	Returns an empty teletext page for further editing.
DEL	Deletes a page from the database and stops its transmission
COP	Copies a page from the database to another place in the database
MOV	Moves a page from the database to another place in the database
ARC	Enables searching for a page in the archive of transmitted pages

Other Page Handling Commands

Command	Description
TIM	**Defines the display time for each subpage of a rotating page**
TRU	**Truncates a rotating page at a specified subpage**
APP	**Appends some rows of a page to a page in the database**
SAV	**Stores a page under a temporary name**
RTR	**Retrieves a temporary page and deletes it**
SDR	**Shows the directory of temporary pages**
MKD	**Creates a new directory in the directory structure**
CHD	**Changes the current directory**
RMD	**Removes a directory**
DRU	**Updates the access rights for a directory**
CPL	**Copies Links (FASTEXT) information to another page**
INF	**Displays all available information about a page**
EXE	**Executes all commands that are stored on a page**
TMC	**Defines commands that should be executed automatically**
FAS	**Defines fast transmitted pages**
WPR	**Defines write protected pages**

User Information Commands

Command	Description
UCD	Displays the username of a user with a usercode
SHO	Displays a list of users that are currently logged in
PAS	Enables a user to change his password
USR	Enables management of users (creation, deletion)

TOP and Name Commands

Command	Description
NAM	Defines the name of a page
TOP	Displays or defines the TOP structure
DAC	Defines TOP Direct Access Pages
VPT	Defines VPT pages

System Commands

Command	Description
CLK	Displays the time and date
SYS	Displays system status information
MEM	Displays available memory
TST	Displays a test page
SMS	Sends an E-Mail message
RMS	Reads an E-Mail message

EBU Commands

Command	Description
I	**EBU login command**
O	**EBU logout command**
R	**EBU read page command**
W	**EBU write page command**

All commands have to be followed by a blank. Many of the commands need a page number to be specified. It must consist of 3 characters (e.g. page 0 has to be specified as 000). The subpage number always follows the page number and is separated from the page number by ".". The subpage number has to consist of two characters (e.g. subpage 1 has to be specified as 01, subpage 7 of the page 538 has to be specified as 538.07). In the following command description the page number will be specified as XXX (or YYY) and the subpage number will be specified as XX (or YY). At some commands a parameter can be appended which is shown in small characters. So XXXa should be replaced by 100A (or any other page number). All commands can be written in lower or upper case characters (i.e. PUT 100A = put 100a).

Priorities

Each user can have a different priority and can use different commands. Depending on the commands that the user should be able to use the following priorities are available:

Priority	Description
9	This is a SYSOP priority. It allows changing system parameters (CFG), passwords (USR)...
1	The highest priority for a normal user. It allows using all commands except for the ones that could change system configuration (USR, CFG, ...).
2	This priority allows using most commands and should normally be assigned to users accessing the system over the modem.
3	This priority allows using only the EBU protocol commands (I, O, R, W) and should only be used over modem connections.
4	Is the lowest priority for a normal user. It only allows readinf and writing pages to the system (GET, PUT), but does not allow changing anything in the transmission (RUN, STO, DEL).
5	This priority is like priority 6, but some commands are not allowed (like SMS).
6	This priority is similar to priority 1, but some commands are not allowed (like TMC).
8	This is a priority which should only be used when FAB Network Controller is used to control the Data Generator over modem or ISDN line.

Commands in Priorities

The following commands are available for different priorities:

| Priority	Allowed commands
Console	all except REG LOG CFG USR SCK SDT DST
1	all except CFG USR TDC RBT RST DRC DST
2	INS RUN GET PUT STO APP DEL DIR TIM TST SYS SHO REG LOG HLP CLK CLR SMS RMS PAS TRU DRI DRU CHD MKD RMD
3 (EBU)	I O R W
4	GET PUT RTR SAV SDR COP DIR TIM TST SYS SHO REG LOG HLP CLK CLR RMS PAS DRI DRU CHD MKD RMD CPL
5	INS RUN GET PUT STO APP DEL MOV DIR TIM TST SYS SHO RTR SAV SDR COP ARC UCD REG LOG HLP CLK CLR RMS PAS TRU DRI DRU CHD MKD RMD CPL
6	INS RUN GET PUT STO APP DEL MOV DIR TIM TST SYS SHO RTR SAV SDR COP ARC UCD REG LOG HLP CLK CLR RMS SMS NAM PAS MOV TRU DRI DRU CHD MKD RMD CPL
9	USR HUP SCK SDT HLP GET DIR TST SYS SHO ARC UCD TMC MEM DRC EXE FAS DAC TOP REG LOG CLK CLR SMS RMS PAS CFG TDC RST RBT UPD DRI DRU CHD MKD RMD

First Steps

If not already you should first get familiar with the concepts of teletext. This can be easily done by simply switching on the teletext decoder in a TV set and browsing through teletext pages on one of the available channels that are already transmitting teletext. If you have not been using teletext on a TV set as a viewer by now it is strongly recommended that you do so before getting familiar with the Teletext Transmission System.

As already described the commands must be executed on an editing terminal. For a quick start make sure the editing terminal is connected correctly to the Teletext Data Generator and start the teletext editing terminal (i.e. FT-ETT 1).

The screen of the teletext editing terminal should display a teletext page (the page can also be blank) that consists of 24 lines and 40 columns. The line on the bottom is the command line where you can type in commands.
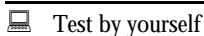
Type: GET 100.01 [RETURN]

If everything is correct after a few moments a teletext page should be displayed on the screen of the editing terminal. If nothing happens then wait for 90 seconds. If TIMEOUT is displayed then the connection to the Teletext Data Generator is not correct. Check the cable and also all communication parameters (speed, port) in the configuration parts of the editing terminal and also of the Teletext Data Generator.

You have just got familiar with the most frequently used command of the FAB Teletext Data Generator. The command GET retrieves the specified page from the disk of the Teletext Data Generator.

The pages in teletext can consist of subpages. The subpages are rotated automatically when they are transmitted. When using commands the page number of any page must be specified with 3 digits (i.e. 152). If the page consists of more than 1 subpage, then the subpage that should be affected by the command must be as well specified (i.e. 152.03 for the third subpage of page 152).

To be able to change anything (write access) on the FAB Teletext Data Generator you require a username and a password. The creation of passwords is described in the installation manual. Please obtain an username and a password before continuing. To register on the Teletext Data Generator you should use the command REG:
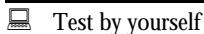
Type: REG username,password [RETURN]

If the OK messages REGISTERED appears that means that your password is OK and you can now use the Teletext Data Generator.

Type: ACC [RETURN]

Your access information will be displayed, which means your rights when accessing the system, like the lowest and highest page that can be changed. Now try to change something on the teletext page that is on the screen of the teletext editing terminal (consult the manual of the editing terminal for details).

Return back to command line and type the following command:
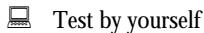
Type: INS 133 [RETURN]

If no error message is displayed (errors are displayed on the right side of the command line in red or yellow colour, OK messages are in cyan colour) the page you have just modified on the screen of the editing terminal has been transferred to the Teletext Data Generator and is now transmitted with the page number 133.

Now try to change something on the page again.

Type: INS 133A [RETURN]

If no error message appears the page on the screen of the editing terminal has now been appended to the page 133. This means a new subpage has been created and the page is now transmitted as subpage 2 of the page 133. You should try to check the result of the commands on a TV set with a teletext decoder.

Type: STO 133 [RETURN]

The page 133 is not transmitted any more after this command is executed.

However the page is still available on the Teletext Data Generator as it has only been stopped but not also deleted.
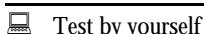
Type: DIR 100 [RETURN]

The list of pages that are available on the Teletext Data Generator should now be displayed. The page 133 should be displayed in yellow colour which means that the page exists on the disk of the Teletext Data Generator but it is not in transmission. The pages that are displayed in green colour are currently transmitted and also stored on the disk.

Type: GET 133.01 [RETURN]

The first subpage of the page 133 should now be displayed on the screen of the teletext editing terminal. As you can see, the page 133 is still available but if you select the page number 133 on the teletext decoder of the TV set, you will not be able to find it.
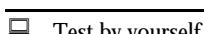
Type: RUN 133 [RETURN]

The 2 subpages of the page 133 should now be put back into transmission.

Type: DEL 133A [RETURN]

The page 133 with all of its subpages is deleted and the page is also removed from transmission.

Type: GET 133 [RETURN]

An error message should now be displayed meaning that the page 133 is not available on the disk as somebody has erased it or it was not created yet.

Type: PUT 133 [RETURN]

The page that is on the screen of the editing terminal is now stored on the disk of the Teletext Data Generator. Use the command DIR to check that the page 133 is displayed in yellow.

Now erase the page that is on the screen of the editing terminal. This is done by issuing the command CLR. A blank page should be displayed. You should always start the creation of a new page by issuing the command CLR. Of course if you only wish to change some data of an existing page you should use the command GET to get it on the screen, change the data and use the command INS or PUT to transfer it back to the Teletext Data Generator.

Be careful: never start creating a new page without previously issuing the command CLR or GET !

Now clear a page by using the command CLR. At the beginning of the line 1 (this is the second line from the top of the screen, see the co-ordinates that are displayed on the screen) type: This is name

Type: NAM 133R [RETURN]

The page 133 will now get a new name. Use the command DIR to see the name.

The specified name will also be used (automatically) in transmission of the TOP system.

Type: HLP [RETURN]

The list of commands that are available on the FAB Teletext Data Generator will be displayed.

Type: HLP NAM [RETURN]

This will display the details about the command NAM. This way you can get detailed help on most of the commands without having to consult the manual.

This was only a short description of some of the most important commands of the FAB Teletext Data Generator. You should in any case browse through the description of the rest of the commands. There are also other interesting commands available that could make your work easier and faster.

Command Reference

The Commands of the FAB Teletext Data Generator
FT-DGS 2.5 Series

This chapter describes all commands which are supported by the FAB Teletext Data Generator. For each command the correct syntax and if applicable also some examples are given.

GET

The command GET is used to get a page from the Data Generator´s hard disk.

GET XXX	(Gets page XXX)
GET XXX.XX	(Gets subpage XX of the page XXX)
GET XXXF	(Gets the first subpage of page XXX)
GET XXXL	(Gets the last subpage of page XXX)
GET XXXN	(Gets the first subpage of page XXX or the next existing page following page XXX)
GET XXXP	(Gets the first subpage of page XXX or the first existing page preceding page XXX)
GET	(Gets the next available page on the Data Generator´s hard disk)
GET .	(Gets the first page preceding the last page that has been got by GET)
GET +	(Gets the first subpage of the first following page on the Data Generator´s hard disk)
GET -	(Gets the first subpage of the first preceding page on the Data Generator´s hard disk)

| GET name | (Gets the page with the name name. The name can also contain the path (directory) of the page. See section File System for details) |
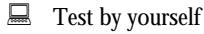
GET 176	(Gets page 176)
GET 342.33	(Gets subpage 33 of the page 342)
GET 243F	(Gets the first subpage of page 243)
GET PETER	(Gets the page with name PETER from current directory) GET /USER2/PETER (Gets the page with name PETER from directory /USER2)

GER

The command GER is used to read a page directly from transmission memory of the Teletext Data Generator. This way all pages that are currently transmitted by the Teletext Data Generator can be read including the pages that are not necessary stored on the hard disk.

GER xxx	(Gets the first subpage of page XXX)
GER xxx.xx	(Gets subpage XX of the page XXX)
GER xxxF	(Gets the first subpage of page XXX)
GER xxxL	(Gets the last subpage of page XXX)
GER xxxN	(Gets the first subpage of page XXX or the next existing page following page XXX)
GER xxxP	(Gets the first subpage of page XXX or the first existing page preceding page XXX)
GER	(Gets the next available page in the Data Generator´s transmission memory)
GER .	(Gets the first page preceding the last page that has been got by GER)
GER +	(Gets the first subpage of the first following page in the Data Generator´s transmission memory)
GER -	(Gets the first subpage of the first preceding page in the Data Generator´s transmission memory)

PUT

The command PUT is used to store a page to the Data Generator´s hard disk.

PUT XXX   (Stores the page on the screen as page XXX, overwriting the previous page XXX)

PUT XXXF   (Stores the page on the screen as first subpage of page XXX)

PUT XXXL   (Stores the page on the screen as last subpage of page XXX)

PUT XXXa   (Appends the page on the screen to page XXX - if page XXX has 2 subpages, the page will be stored as subpage 3)

PUT XXX.XX   (Stores the page on the screen as subpage XX of the page XXX, overwriting the previous subpage XX of the page XXX. XX must not be higher than the number of subpages of the specified page plus one)

PUT XXX.Xxi   (Inserts the page on the screen in the page XXX - the page will be stored as subpage XX, all following subpages, including XX, will be moved one up)

PUT name   (Stores the page on the screen as the page with name name. The name can also contain the path (directory) of the page. See section File System for details)
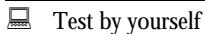
PUT 154   (Stores the page on the screen as page 154)

PUT 128.01I   (Stores the page on the screen as subpage 01 of the page 128. All subpages of the page 128 will be moved one up - subpage 1 will become subpage 2,...)

PUT PETER   (Stores the page on the screen as page with name PETER in the current directory)

PUT /USER2/PETER   (Stores the page on the screen as page with name PETER in the directory /USER2)

RUN

The command RUN is used to start transmitting a page (including all of its subpages) that is stored on the Data Generator´s hard disk. It is not possible to transmit only some subpages of a page.

RUN XXX   (Starts transmitting page XXX and all of its subpages)

RUN 256   (Starts transmitting page 256 and all of its subpages)
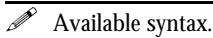
STO

The command STO is used to stop transmitting a page (including all of ist subpages).

STO XXX   (Stops transmitting the page XXX and all of its subpages)

STO 356   (Stops transmitting the page 356 and all of its subpages)

INS

The command INS is used to store a page on the Data Generator´s hard disk and to start transmitting the page immediately after that. It is the same as executing commands PUT and RUN subsequently.
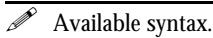
INS XXX   (Same as PUT XXX and RUN XXX)

INS XXXa   (Same as PUT XXXa and RUN XXX)

INS XXX.XX   (Same as PUT XXX.XX and RUN XXX)

INS XXX.Xxi (Same as PUT XXX.XXi and RUN XXX)
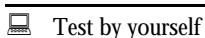
INS 235A   (Appends the page on the screen to the page 235 and starts transmitting the page 235)

INS 166.33   (Stores the page on the screen as subpage 33 of the page 166 and starts transmitting the page 166)

INS 303.02I (Inserts subpage 2 of page 303 before previous subpage 2, which becomes now subpage 3, moving all following one number higher and starts transmitting the complete page 303)

APP

The command APP (append) can be used to append only few rows to existing page. All the rows present on the editor screen (even if they only contain control characters for colours without any characters and seem to be empty) will be written to the existing page. Only the rows which contain only spaces (#32) are taken from the old page. This way the transmission time from terminal to generator is shorter if only few rows have changed. Also the characters in packets X/26 (Æ,Ø) are taken from appropriate pages for the correct rows.

With command APP it is not possible to erase rows from page. The only way to do this is to transmit rows which contain only control characters but no text. When using FAB Teletext Editing Terminal (FT-ETT 1) it is necessary to make a row which has the "Start Box" as the last character in the line as all other rows without text are eliminated. Command APP requires that the old page and the appending page have the same character set (marked in the top right corner of editor screen). Otherwise an error message is returned. If the old page does not exist an empty page will be used instead.

Syntax for APP is the same as for INS command and also the functionality is the same in respect of transmission and handling of pages.
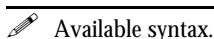
<table>
<tr><td>SYNTAX
✏ Available syntax.</td><td>APP XXX</td><td>(Appends new rows to page XXX and executes RUN XXX)</td></tr>
<tr><td></td><td>APP XXX.XX</td><td>(Appends new rows to page XXX.XX and executes RUN XXX)</td></tr>
<tr><td>EXAMPLES
🖥 Test by yourself</td><td>APP 235A</td><td>(Appends the page on the screen to the page 235 and starts transmitting the page 235)</td></tr>
<tr><td></td><td>APP 166.33</td><td>(Appends new lines from the screen to subpage 33 of the page 166 and starts transmitting the page 166)</td></tr>
</table>
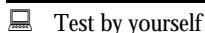
TIM

The command TIM is used to define the display time of a subpage when the page is rotating. To put the actual time into effect use the RUN command.

TIM XXX TT   (Defines the display time of all subpages of page XXX to be TT seconds)

TIM XXX.XX TT   (Defines the display time of page XXX.XX to be TT seconds)

TIM 100.01 06   (Defines the display time of the page 100.01 to be 6 seconds)
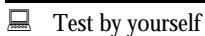
The effect of the display time depends on the "Rotating page transmission mode", which is described in the Installation manual and on the contents of the fast rotating pages list (see also FAS command).

TRU

This command will truncate and if the page was transmitted when the command is executed the page will also be RUN.

TRU XXX.YY   Erases all subpages following subpage YY of the page XXX and runs the page XXX if it was on air before.

TRU XXX.YYR   Erases all subpages following subpage YY of the page XXX and runs the page XXX.

TRU XXX.YYS   Erases all subpages following subpage YY of the page XXX and stops transmission of the page XXX.
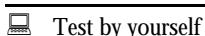
TRU 367.08   Erases all subpages following subpage 8 and runs the page 367 if it was on air before. Subpage 8 will not be erased.

DEL

The command DEL is used to delete a page from the Data Generator´s hard disk. When the complete page (including all subpages) is deleted, the page is not transmitted any more (like executing STO command). When only one subpage is deleted, the deleted subpage is not transmitted any more (like executing RUN command after deleting a subpage).

DEL XXX   (Deletes page XXX. The page must not consist of more than one subpage (=not rotating). After that the page is also not transmitted any more)

DEL XXXa   (Deletes all subpages of page XXX. The page is also not transmitted any more)

DEL XXX.XX   (Deletes the subpage XX of the page XXX. The subpage XX is also not transmitted any more)

DEL name   (Deletes page with the name name. The name can also contain the path (directory) of the page. See section File System for details)

DEL 109A   (Deletes all subpages of the page 109 and stops transmitting the page 109)

DEL 342.12   (Deletes subpage 12 of the page 342 and stops transmitting subpage 12)

DEL PETER   (Deletes page with name PETER in current directory)

DEL /USER2/PETER   (Deletes the page with name PETER in directory /USER2)

COP

The command COP is used to copy a page or a subpage to another page.
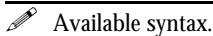
COP XXX YYY.YY (Copies the page XXX (must not be rotating) to the subpage YY of the page YYY. The subpage YY will be overwritten)

COP XXX.XX YYY (Copies the subpage XX of the page XXX to the page YYY (must not be rotating). The page YYY will be overwritten)

COP XXX YYY (Copies the page XXX (including all of its subpages) to the page YYY. The page YYY must not exist. If the pages XXX and YYY are not rotating, the page XXX is copied to the page YYY - the page YYY is overwritten)

COP XXX YYYa (Appends the page XXX (including all of its subpages) to the page YYY)

COP XXX YYYd (Deletes the page YYY and copies the page XXX (including all of its subpages) to the page YYY)

COP XXX YYY.Yyi (Inserts the page XXX (must not be rotating) into the page YYY as subpage YY. All following subpages (including YY) will be moved one up)

COP XXX.XX YYYa (Appends the page XXX.XX to the page YYY)

COP XXX.XX YYYd (Deletes the page YYY and copies the page XXX.XX to the page YYY)

COP XXX.XX YYY.YY (Copies the page XXX.XX to the page YYY.YY. The page YYY.YY will be overwritten)

COP XXX.XX YYY.Yyi (Inserts the page XXX.XX into the page YYY as subpage YY. All following pages of the page YYY (including YY) are moved up)

COP XXX YYY ZZZ (Copies all pages (including subpages) starting with page number XXX and ending with page number YYY to the pages starting with page number ZZZ. All pages that are following ZZZ will be overwritten by the moved pages! If one of the source pages does not exist then the destination page is deleted!

You can specify an additional parameter R or S at the end of each COP command. When you specify R all destination pages from the COP command will be put into transmission (see RUN command). When you

specify S all destination pages from the COP command will be put removed from transmission (see STO command).

For easier remembering of all different COP commands, you should understand how they are organised. A rotating page can not be overwritten without specifying the D parameter. To append one or all subpages of a page use the A parameter. To insert a single subpage of a page use the I parameter.

COP 100.01 150.07	Copies subpage 1 of page 100 to subpage 7 of page 150. Note that page 150 should have at least 6 subpages.
COP 170 247	Copies all subpages of page 170 to page 247. Page 247 must not exist.
COP 170 247A	Appends all subpages of page 170 to page 247.
COP 170 247D	Deletes page 247 and copies all subpage of page 170 to page 247.
COP 567.23 422.11I	Inserts subpage 23 of page 567 to page 422 as subpage 11. All subpages from 11 on of the page 422 will be moved one number up.
COP 199.03 223A	Appends subpage 3 of page 199 to page 223.
COP 237 765.13I	Inserts page 237 (must consist of one subpage only) as subpage 13 of page 765. All subpages starting with subpage 13 and higher on the page 765 will be moved one up.
COP 235 256 754	Copies pages from 235 to 256 to pages starting with 754. This means that page 235 will be copied to page 754, page 236 to 755... and page 256 to page 775. If any of the pages from 754 to 775 was on air before moving it will removed from transmission. If a page between 235 and 256 does not exist then the corresponding destination page will be erased.
COP 235 256 754R	Same as above but all pages from from 754 to 775 will be put on air (RUN).
COP 235 256 754S	Same as above but all pages from from 754 to 775 will be removed from transmission (RUN).

CPL

The command CPL is used to copy link information (FASTEXT data - packets X/24 and X/27) from a page or a subpage to another page.

CPL XXX YYY   (Copies links from the page XXX (must not be rotating) to all subpages of page YYY)

CPL XXX.XX YYY   (Copies links from the subpage XX of the page XXX to all subpages of the page YYY)

CPL XXX YYYa   (Copies the links from all subpages of page XXX to the corresponding subpages of page YYY. The page XXX and YYY must have the same number of subpages)

CPL XXX YYY.YY   (Copies links from the page XXX (must not be rotating) to subpage YY of page YYY)

CPL XXX.XX YYY.YY   (Copies links from the subpage XX of page XXX to subpage YY of page YYY)

CPL 100.01 150.07   Copies links from subpage 1 of page 100 to subpage 7 of page 150. Note that both subpages have to exist.

CPL 170 247   Copies links from page 170.01 to all subpages of page 247. Page 247 must exist and page 170 must not be rotating page.

CPL 170 247A   Copies links from page 170.01 to page 247.01, links from 170.02 to 247.02 in the same way to all existing subpages. Note that pages 170 and 247 must have the same number of subpages.

MOV

This command is used for moving pages. This is completely the same as copying pages using the command COP except that the source pages are deleted after they are copied. For example moving the page 139 to page 155 by using the command MOV 139 155 will copy all subpages of the page 139 to the page 155 and if the copying process is successful it will erase all subpages of the page 139. Blocks of pages (i.e. pages from 133 to 157) can also be moved in addition to all possibilities of the COP command. All source pages that were on air before they were copied (moved) will be run (put on air) again after they are moved automatically. The pages that were not on air before they were moved will not be put on air after they are moved. To force all pages that are moved to be put on air simply specify the parameter R at the end of the MOV command.

Each syntax that is used at the COP command is also allowed at the MOV command. Instead of COP just type MOV. To RUN all pages that are moved specify the parameter R at the end of command. To STOP all pages that are moved specify the parameter S at the end of command.

MOV 245.03 144.02   Moves subpage 3 of page 245 to subpage 2 of page 144. If the subpage 2 of page 144 exists it will be overwritten. Subpage 3 of page 245 will be deleted and page 245 will be RUN. Page 144 will not be RUN.

MOV 245.03 144.02IR Inserts subpage 3 of the page 245 as subpage 2 into the page 144. Subpage 3 of the page 245 will be deleted and page 245 will be RUN. Page 144 will also be run because of the parameter R.

MOV 235 256 754   Moves pages from 235 to 256 to pages starting with 754. This means that page 235 will be moved to page 754, page 236 to 755... and page 256 to page 775. Be careful because pages from 754 to 775 will be erased when the source pages are moved. If any of the pages from 235 to 256 was on air before moving it will be put on air again after it was moved.

MOV 235 256 754R   Same as above but all pages from from 754 to 775 will be put on air (RUN).

DIR

The DIR command is used to display the directory of the pages that are stored on the disk and/or are currently transmitted. The names of the pages are also displayed.

DIR XXX   (Displays all pages from XXX on that are stored on the disk and are not transmitted (in yellow) and the pages that are stored on the disk and are currently transmitted (in green). If the page in transmission is different than the page on the disk, an asterisk (*) will be displayed between the subpage number (which is the number of subpages of a page) and the page name.
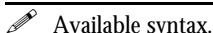
DIR XXXd   (Displays all pages from XXX on that are stored on the disk)

DIR XXXr   (Displays all pages from XXX on that are currently being transmitted)

DIR   (Continues displaying the directory of pages, if not the whole directory could be displayed on one screen)
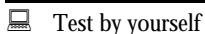
DIR 100   (Displays all pages from 100 on that are stored on the disk and are not transmitted and all pages from 100 on the are currently being transmitted)

DIR   (Continues the list of pages if not the whole list could be displayed on one screen)

DRI

The DRI command is used to display the information about the current directory. See the section File System for details on directories. The information displayed contains:

Directory: /directory

Owner: Owner Usercode

Read Priorities: Priorities allowed to read directory

Write Priorities: Priorities allowed to write directory

Subdirectories: Subdirectories in the directory

Pages: Pages stored in the directory

The field Directory: displays the name of the current directory.

The field Owner: displays the usercode of the owner of the directory. The owner of the directory can either be None or any available usercode. The owner is allowed to read and write the directory independent of his priority.

The field Read Priorities: displays the priorities that are allowed to read the directory. All users having one of these priorities are allowed to read the directory. In addition priorities 0 (Console) and 9 (Sysop) are allowed to read all directories.

The field Write Priorities: displays the priorities that are allowed to write the directory. All users having one of these priorities are allowed to write the directory. In addition priorities 0 (Console) and 9 (Sysop) are allowed to write all directories.

The Subdirectories: are the subdirectories in this directory.

The Pages: are the pages that are stored in the directory.
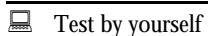
DRI   (Displays directory information)

DRI name   (Displays directory information. Only page names in the directory that are alphabetically higher or equal to name are displayed)

DRU

The command DRU is used to to change the directory access information. First the directory information must be displayed on the screen by using the command DRI.

Then change the necessary data (Owner, Read and Write Priorities) and execute DRU command.
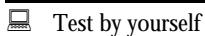
DRU   (Changes the directory information, mask created by command DRI must be on the screen)

MKD

The command MKD is used to create a subdirectory within a directory. The user must have write access to the directory where the subdirectory will be created.

MKD name   (Creates a subdirectory with the name name. The name of the subdirectory must not be longer than 8 characters and must not start by a digit)

MKD /PETER   (Creates the directory /PETER directly in the root directory /)

MKD PETER   (In this case the result of the command is depending on the current directory. The directory PETER will be created in the current directory)

CHD

The command CHD is used to change the current directory. The user must have read access to the directory to which he wants to change to.

CHD dirname   (Changes the current directory to the directory with the name dirname, which must be existing)

CHD /PETER   (Changes the current directory to /PETER)

CHD PETER   (In this case the result of the command is depending on the current directory. The current directory is changed to the directory /current/PETER)

RMD

The command RMD is used to remove a subdirectory. The user must have write access to the directory where the subdirectory will be removed and the directory must be empty.

RMD name   (Removes a subdirectory with the name name)

RMD /PETER   (Removes the directory /PETER)

RMD PETER   (In this case the result of the command is depending on the current directory. The directory /current/PETER will be removed)

SAV

The command SAV is used to store a page under a user-definable name. The name can consist of up to 7 characters (only characters "A" to "Z" and "a" to "z") and can be retrieved by the RTR command. When the page is retrieved by the RTR command it is also automatically deleted from the Data Generator´s hard disk. Up to 115 pages can be saved to the Data Generator´s hard disk with the SAV command.

SAV name   (Saves a page with the name "name" on Data Generator´s hard disk)

SAV PETER (Saves a page with the name PETER on Data Generator´s hard disk)

RTR

The RTR command is used to retrieve a page that has been saved by the SAV command. The page is also automatically deleted from the Data Generator´s hard disk.

RTR name   (Retrieves a page with the name "name". The page is automatically deleted from the Data Generator´s hard disk)

RTR PETER (Retrieves a page with the name PETER. The page is also deleted from the Data Generator´s hard disk)

SDR

The SDR command is used to display the directory of pages saved by the SAV command.

SDR   (Lists the saved pages)

REG

The REG command is used to register into the Data Generator. Every user has to register before using any commands except on "console" terminals. Each user must have a name and a password which the system operator must write into the password list. See the Installation manual for details on updating the password list.
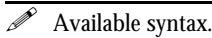
REG name,password   (Registers the user with the name "name" and the password "password")
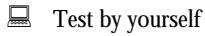
REG PETER,PAN   (Registers the user with the name PETER and the password PAN. After the comma (",") the password will not appear when it is typed in on FAB Teletext Editing Terminal)

LOG

The LOG command is used to log out of the Data Generator. Each user must issue the LOG command after finishing his or her work. After LOG the new user that wants to use the Data Generator must register again.

LOG   (Logs out of the system)

SHO

The SHO command is used to show the current users of the Data Generator. The user names and user codes are displayed as well as the types of terminals.
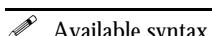
SHO 0   (Displays physical connection data of the terminals)

SHO   (Displays registered and unregistered users of the terminals)

SHO x   (Continues display of the users of the terminals)

UCD

The UCD command is used to display the username of the user with the specified usercode. This is especially useful when searching through the archive where only usercodes are displayed.

UCD X   (Displays the username of the user with the usercode X)

UCD L   (Displays list of usernames starting with the usercode 1)

UCD XL   (Displays list of usernames starting with the usercode X)

UCD 23   (Displays the name of the user with the usercode 23)

UCD 3L   (Displays list of users with usercodes higher or equal 23)

NAM

The NAM command is used to specify and display the names of the pages. Only basic pages can have names (subpages can not have names). The names consist of up to 12 characters. The names that can be specified for each page will also be used for TOP transmission. So it is useful that all group and block pages have names (see also TOP command).

NAM XXXr   Renames the page XXX. The new name must be specified in the line 1 (this is the second line from the top of the screen, see the co-ordinates that are displayed on the screen) of the page on the screen

NAM XXXd   Deletes the name of the page XXX

NAM XXX   Displays the names of pages beginning with XXX

NAM   Continues the list of names if not all of the names could be displayed on one screen

ARC

The ARC command is used for searching through the automatic archive. All pages are stored to the archive when they are transmitted for the first time. Together with the page there is also additional data stored, the time when the first transmission of the page has been invoked, the usercode of the user who invoked the transmission, the number of the terminal he was using and the usercode of the user who stored the page to the Data Generator´s hard disk.

The archive is storing pages for at least last 7 days (including today). If a page is being transmitted and has not been stored to the archive for 7 days already (has not been changed for 7 days), it will automatically be stored to the archive on midnight. This way all the pages that are transmitted are stored to the archive once a week even if they are never changed (index pages,...).

ARC DIR   (Displays the archive directory for the current month)

ARC DIR XX (Displays the archive directory for the month X (01-12))

ARC XXXdd (Displays the list of pages with page number XXX that were transmitted on the day "dd", i.e. ARC 178WE for wednesday)

ARC XXX   (Displays the list of pages with page number XXX that were transmitted on the day last selected by ARC XXXdd command)

ARC   (Continues the list of pages if not the complete list could be displayed on one screen)

ARC XXXX   (Displays the page with index (IDX) XXXX)

ARC XXXl   (Displays the last page with page number XXX in the archive)

ARC P   (Displays the previous page with the last selected page number in archive)

ARC uXXXdd   (Displays the list of pages which were created by the user with usercode XXX on the day "dd" (doesn´t have to be specified))

ARC Ddamoye   (Selects the archive for the date da.mo.ye, as ARC XXXdd)

Page number XXX may be replaced by ... to display the list of all pages.

ARC 165WE (Displays the list of pages with page number 165 which have been transmitted on last Wednesday)

ARC 303 (Displays the list of pages with page number 303 which have been transmitted on the date of the previously selected archive)

ARC 0231 (Displays the page that is stored in the archive with the index (IDX) number 0231)

ARC ...L (Displays the last page in archive)

ARC P (Displays the previous page in archive)

ARC U003SU (Displays the list of pages that have been created by the user with usercode 003 and transmitted on sunday)

ARC D170692 (Displays the list of pages that have been transmitted on June the 17th 1992)

By using either ARC XXXdd or ARC Ddamoye one of the archives is selected. After that the day or date does not have to be specified for the previously selected archive. This means that ARC 133 will show all pages 133 in the previously selected archive.

DAC

The DAC command is used to specify the "Direct Access pages" used in TOP transmission. Up to 15 pages can be added to the list of direct access pages. It is recommended that the pages are named by the NAM command.

DAC   (Displays the list of direct access pages)

DAC XXXr   (Removes the page XXX from the list of direct access pages)

DAC XXXa (Adds the page XXX to the list of direct access pages)

TOP

The TOP command is used to define the TOP structure in TOP transmission. The main indexes (news,...) should be specified as block pages (displayed in cyan) and the subindexes (world news, local news, politics, sport, weather,...) should be specified as group pages (displayed in yellow). All other pages should be specified as normal pages or subtitle pages. If a page is specified as a (running) subtitle page (displayed in red) it can only be accessed from the terminal by GET and PUT but not by RUN and STO. All the pages that are used by the subtitle generator should be specified as subtitle pages. Running subtitle pages are put on air when no subtitling is running and stopped when subtitles are transmitted.
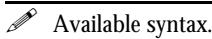
TOP XXX   (Displays the TOP structure beginning with the page XXX)

TOP XXXn   (Defines page XXX as a normal page)

TOP XXXb   (Defines page XXX as a block page)

TOP XXXg   (Defines page XXX as a group page)

TOP XXXp   (Defines page XXX as a TV programme page)

TOP XXXs   (Defines page XXX as a subtitle page)

TOP XXXr   (Defines page XXX as a running subtitle page)

TOP   (Continues displaying the TOP structure if not the complete TOP structure could be displayed on one screen)

SYS

The SYS command is used to display the system status.
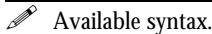
SYS 0 (Displays the disk and operation data)

SYS 1 (Displays the first configuration page)

SYS 2 (Displays the second configuration page)

SYS 9 (Displays the system status)

The configuration data is described in the Installation manual of the Data Generator.

TST

The command TST is used to display the test page.
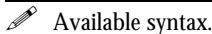
TST   (Displays the test page)

CLR

The CLR command is used to clear the page on the screen of the Editing Terminal. All Page Parameters are adjusted to normal and the link information is cleared. The character set is selected to be the same as on the page 100.01 and the display time is set to 15 seconds. This command should be used before creating new pages to prevent use of wrong parameters and links.

CLR   (Clears the page and sets all Page Parameters to normal)

TMC

The command TMC is used to control time commands. Time commands are commands which are automatically executed by the system on specified times and days. The time commands can be executed once only or repeatedly each day, week and also in other intervals which can be specified in a very flexible way. Each time command has its own unique number by which it can be retrieved, modified and deleted.

Each time command belongs to a user. This means that when the time command will be executed it will be executed with the rights (priority, allowed pages, ...) of the specified user. Consoles use usercode 0, users with priority 9 can read and modify all time commands (also time commands created by other users) and users with priority 1 can only create their own time commands and all time commands updated by users with priority 1 will belong to the user which has updated the time command.

TMC   (Displays the mask for a time command)

TMC L   (Displays the list of time commands which will be displayed in order of their execution)

TMC xL   (Displays the list of time commands in order of their execution but starting with time command x)

TMC V   (Displays the list of time commands with their descriptions which will be displayed in order of their execution)

TMC xV   (Displays the list of time commands with their descriptions which will be displayed in order of their execution but starting with time command x)

TMC ADD   (Adds the time command which is on the screen - first use the command TMC without any parameters and fill in the mask - to the list of time commands)

TMC x   (Displays the time command x - use TMC L first and find the unique number of the command first and then use TMC x to display the data)

TMC xU   (Updates the time command with the number x. However the time command x must first be displayed on the screen by TMC x and then modified before using TMC xU)

TMC xD   (Deletes the time command x. However the time command x must first be displayed on the screen by TMC x before using TMC xD)

See the section System Features / Time Commands for detailed explanation on using time commands.

EXE

The EXE command is used for execution of commands that are stored on any page of the Data Generator´s hard disk. The commands must be written on the beginning of any line of the page. You can add comments to the page containing commands but make sure that each comment starts on the second character of the line, the first character must be a space or a colour character otherwise the line is considered to contain a command which will be executed. You can use all commands in an EXE page tha can also be used from an editing terminal. When command from an EXE page are executed a virtual terminal is created so that also commands GET and INS can be used.
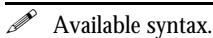
EXE XXX   (Executes all commands on the page XXX)

EXE XXXc   (Checks all commands on the page XXX for the correct syntax)

EXE XXXl   (Executes all commands on the page XXX and displays the errors returned after execution of each command)

EXE XXXa   (Executes all commands on all subpages of the page XXX starting with the first command on the subpage 1)

EXE XXX.SSf   (Executes all commands on subpages >= SS of the page XXX starting with the first command on the subpage SS)

EXE   (Checks all commands that are on the page currently on screen for the correct syntax)

FAS

The FAS command is used for selection of pages that should be transmitted exactly at display times specified on each page or subpage. See Page Parameters of the FAB Teletext Editing Terminal to select the exact display time of a page or subpage. When a page is specified as a fast rotating page and it is not rotating it will be transmitted exactly at the display times selected in Page Parameters. When a page consists of more subpages (rotating page) all subpages will be displayed exactly for the display time defined in Page Parameters on each subpage. The display times can also be defined by the TIM command. It is possible to select up to 16 pages as fast rotating and it is recommended that page 100 is also fast rotating (with display times from 3 to 6 seconds).
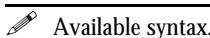
FAS   (Displays the list of fast rotating pages)

FAS XXXa   (Adds the page XXX to the list of fast rotating pages)

FAS XXXr   (Removes the page XXX from the list of fast rotating pages)

SMS

The command SMS is used to send a message to other users of the Data Generator. When the user the message has been sent to executes the next command a special tone will be generated and a note will appear about the waiting message he can read by using the RMS command. If the message is not read within one month it is automatically erased.

SMS XXX   (The page on the screen is sent to the user with the user code XXX)

SMS tXX   (The page on the screen is sent to any user using the terminal XX)

SMS 005   (The page on the screen is sent to the user with usercode 005)

SMS T07   (The page on the screen is sent to anybody working on the terminal number 7)

RMS

The RMS command is used to read a message that was sent by using the SMS command. The message is displayed and erased from the Data Generator´s hard disk after executing this command. When MORE-TYPE RMS is displayed in the command line additional messages can be read using the RMS command. If a message is not read within one month it is automatically erased.

RMS   (Reads a message if it is available)

HLP

The HLP command is used to display help for all commands that can be used on the FAB Teletext Data Generator.

HLP   (Displays the list of all commands)

HLP CCC   (Displays the help for the command CCC)

HLP INS   (Displays help for the INS command)

PAS

The PAS command is used to change the password of the user that is currently registered to the system.

PAS   (Displays the mask for entering new password)

PAS username,oldpassword   (Changes the old password with the one currently on the screen)
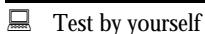
First issue the command PAS to get the mask for a new password. Then enter the new password immediately after PASSWORD and repeat the new password immediately after REPEATED. Then issue the command

PAS username,oldpassword

where username is the username of the user that is currently regsitered on the terminal and oldpassword is the old password of the user.

ACC

The ACC command is used to display the access information.

ACC   (Displays the access information)

INF

The INF command is used to display information about a page.

INF ppp   (Displays information about the page ppp)

INF 198   (Displays information about the page 198)
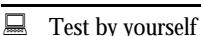
CLK

The CLK command is used to display the time of day and the date the Data Generator is transmitting.

CLK   (Displays the time of day and the date)

CLK OFF   (Switches off the animated clock and displays the normal clock. See the Animated Clock section for details)

DST

The DST command is used to change between the Daylight Saving Time and the normal time. This command should only be executed from the time commands (see the command TMC) between 01:00 and 22:59 hours by uses with priority 1, 9 or consoles.

DST ON   (The clock will be moved one hour forward to daylight saving time)

DST OFF   (The clock will be moved one hour backwards to the normal time)

WPR

The WPR command is used to write protect specific teletext pages. Only a complete teletext page with all of its subpages can be write protected. When a page is write protected it is not possible to PUT any page on the write protected page number. It is not possible to write protect pages in the file system.
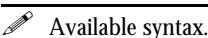
WPR XXX   (Displays the list of write protected pages starting with page XXX)

WPR   (Continues display of write protected pages if there are more than they fit on one screen)

WPR XXXp   (Write protects the page XXX)

WPR XXXu   (Unprotects the page XXX)

VPT

The VPT command is used to select pages that should be treated as VPT pages. When a page is marked as a VPT page and it is put into transmission (by INS or RUN command), the system tries to find a two-digit code in magenta colour and replaces it by a checksum code that is calculated from the rest of the page. Please consult the VPT specification, available from IRT in Munich for details on how a VPT has to be built and what data it should contain.

VPT XXX   (Displays the list of VPT pages starting with page XXX)

VPT   (Continues display of VPT pages if there are more than they fit on one screen)

VPT XXXa   (Marks the page XXX as a VPT page)

VPT XXXr   (Unmarks the page XXX as a VPT page)

System Features

The System features of the FAB Teletext Data Generator
FT-DGS 2.5 Series

This chapter describes some of the additional features of the FAB Teletext Data Generator. You should read this section to make sure that some actions which are performed automatically will not cause any loss of data.

Transmission of Pages

When the Data Generator is switched on it automatically starts transmitting all pages that it has been transmitting before it has been switched off. Also at the same time all pages on the hard disk are checked for their contents. Only when the checking of the pages is finished the terminals can start using the Data Generator. On trying to issue any command before all pages are checked the message OFF LINE will appear which means that the Data Generator is not ready to execute any commands from the terminals.

Every day exactly on midnight the system starts transmitting all the pages that are currently transmitted again. It is the same as issuing RUN command on all pages that are currently transmitted. This is needed because when the date in the header line of each page is changed also the CRC code of the page has to be recalculated and all pages have to be retransmitted again.

Be careful when you are preparing (rotating) pages. When a page is changed on the hard disk with the PUT command, the page with the same number in transmission is not changed. You should be aware that the page you stored by the PUT command will automatically be transmitted on midnight or when the Data Generator is restarted.

Automatic Archive

When the automatic archive is enabled (see Installation manual of the Data Generator) all the pages that are not yet stored in the archive (the changed pages) and are transmitted by the RUN command are automatically stored in the archive.

The archive is organised for the past days. To access the archive the ARC command must be used.

To see the archive directory use the ARC DIR command. The number of pages stored in archive will be displayed.

To select the day of the archive you want to search in use the command ARC ...MO for Monday, ARC ...TU for Tuesday and so on or ARC D020992 for the archive for the date 2nd of September 1992.. When using the command ARC after that the previously selected day will automatically be used.

To search for a page in the archive you should know the number of the page when it was transmitted for the first time. By using the command ARC 335 the stored data of all different transmissions of the page 335 will be displayed. If not all of the data can be displayed on one screen just type ARC again to see more.

The data that is displayed is:

Time   time when the first transmission of the page has been invoked.

IDX   index of the page in the archive.

Pgn   page number.

Trm   terminal that invoked the transmission of the page.

RUN   usercode of the user that invoked the transmission (CON=console).

PUT   usercode of the user that stored the page to Data Generator´s hard disk.

The special meaning of the data displayed:

Trm	RUN	PUT	Description
Txx	**y**	**z**	user y issued RUN from the terminal xx, user z issued PUT or INS
SYS	**SYS**	**z**	user z issued PUT, the system started transmitting the pages on midnight or when it was restarted
TMC	**y**	**z**	user z issued PUT, the system started transmitting the page because of one of the time commands, created by user y

If you want to see the data of all pages stored in the archive of selected day not regarding the page number use the command ARC ... (replace the page number by ...). To see the contents of the page that is stored in the archive you must know the index (IDX) under which it is stored in the archive. Use the command ARC 0005 to display the page with index 0005.

It is also possible to search for pages created by a specific user. For that use the ARC uXXXtt command, where XXX is the usercode of the user you are searching for and tt is the day (MO, TU, WE,..) you want to search in. It is not necessary to specify the day (Examples: ARC U007SU searches for all pages that have been stored to the Data Generator´s hard disk by the user with usercode 007 on sunday,

ARC U043 searches for pages created by user 043 on the last day selected).

Time Commands

Time commands are used for automatic execution of commands at specific times on specific days. Up to 999 time commands can be specified.

Time commands are managed from an editing terminal using the command TMC, which is only available to users with priorities 1, 9 and consoles. See the description of command TMC to see how to create, modify and delete time commands.

The command TMC without any parameter will display a mask for a time command. Following fields are available and should be filled in:

Usercode:

------------ **Time & Date** ------------

Hour:

Minute:

Second:

Day/of week:

Month:

Year:

Execute if before:

------ **Description of command** -------

Description:

Commands to be executed:

The field usercode must contain the code of the user which is responsible for the time command. Normally this is the usercode of the user that created this time command and consoles use usercode 0. Only users with priority 9 and consoles can speicify a different usercode that their own and this should be done with taking care. You should be aware that all commands are later executed with the rights (priority, allowed pages, allowed directories, allowed commands...) of the specified user and maybe some commands will not be executed correctly if the specified usercode does not have enough rights for the desired command.

The Time & Date section may contain wildcards (XX - which means any matching) and also more than one specified number. Always the next time & date will be found that is matching the specified data.

The fields HOUR, MINUTE, DAY/OF WEEK, MONTH and YEAR can contain wildcard (XX) but the field SECOND can not contain wildcard.

Example1:

Hour: 12

Minute: 10

Second: 13

Day: 25

Month: 07

Year: 98

When this is specified, the command will be executed only once and only on the specified date and at the specified time.

Example 2:

Hour: 12 15 19

Minute: XX

Second: 03

Day: 25 26 27

Month: XX

Year: XX

When this is specified, the command will be executed undependent of the year, month and minute but whenever the hour is matching 12, 15 or 19 and the day is matching 25, 26 or 27 and the second is matching 03.

For example if today is 23rd of March, the command will first be executed on 25th of march at 12:00:03.

Example 3:

Hour: **05**

Minute: **15**

Second: **03**

Day: **MO WE FR**

Month: **XX**

Year: **XX**

When this is specified, the command will be executed each Monday, Wednesday and Friday at 05:15:03.

You can use any combination of above examples as long as you follow these rules:

- only one wildcard may be specified in a field

- the field SECOND must not contain a wildcard

- each of the fields may either contain 1 or more numbers

- the field DAY/OF WEEK may either contain numbers for days of month or words for days of week (first 2 characters of English name) but not both)

The "Execute if before" field contains the date and time when the time command should not be executed any more. You can also enter a short description of the command.

You can specify one command per line in all lines below the line containing "Execute commands:". Please note that you can specify all commands that you are allowed to use from the editing terminal. When commands from the TMC page are executed a virtual terminal is created in the system which enables execution of all commands including GET and INS where the page memory of the terminal is required.

If you require more commands to be executed at the specified time and date then use the command EXE with a parameter specifying a page that will contain more commands for execution. See the description of command EXE for details.

When a time command is added to the list of time commands with the command TMC ADD its first execution time and date is calculated and regarding this the time command is sorted into the list of time commands. With the command TMC L you are able to see all time commands in their order of execution. Each time command can be found in the list only once

even if the command should be executed more often. When the time is higher or equal to the specified time of the time command that should be executed first, that time command is executed.

This means that also if the system is switched off, all time commands will be executed when the system is running again even if the time of execution has passed. After the time command has been executed its next time and date of execution are calculated. If the next time of execution can not be calculated (maybe the command only had to be executed once) or if the next time of execution is higher than what has been specified in "Execute if before" field, than the time command is deleted from the list of time commands. Otherwise it is again sorted in the correct position in the list of time commands.

It is very important to know that the order of execution of time commands that should be executed at the same time and date is coincidental. The reason is that when a time command is sorted into the list of time commands its exact position is undefined if there is any other time command with the same time and date of execution already present (you can never know which one will be executed first).

So if the order of execution of time commands is important, the times should differ at least in the SECOND field for at least one second.

TOP System

TOP stands for Table of Pages and is a special standard for categorised transmission of teletext pages, published by IRT München.

The TOP standard enabled easier access to teletext pages without having to know the number of a teletext page. It is a big help for teletext viewers that have a teletext decoder that supports the TOP standard.

The big advantage of the TOP system compared to FLOF (FASTEXT) is its implementation on the FAB Teletext Data Generator. The TOP system only has to be configured once or when changing the index structure of the teletext, all the rest is handled automatically by the FAB Teletext Data Generator enabling the teletext editors to concentrate on the contents of teletext instead of having to think about how to specify TOP settings as normally has to be done when using FASTEXT. The other big advantage of the TOP system on the viewer side is that the viewer will get a message when he selects a page that is not in transmission. Also when pressing the NEXT and PREVIOUS PAGE buttons will skip the pages that are not transmitted.

According to the TOP standard the teletext should be structured into blocks and groups of pages. Each block can consist of more groups. The following is an example of a teletext structure according to TOP standard:

Page number	TOP Type	Page name

100		Block	Main index
110		Block	News index
	111	Group	International
	123	Group	National
150		Block	Sport index
	151	Group	International
	160	Group	National
300		TV Programme	TV Index
	301	Group	Morning
	302	Group	Afternoon
	303	Group	Evening
777		Subtitle	Subtitles

In the TOP structure each page can be:

- Block

- Group

- TV Programme (block)

- Subtitle

- Normal

Block pages should be the pages with main indexes like NEWS INDEX, SPORTS INDEX, TV INDEX and similar. Groups should be created within the blocks. As seen above the block NEWS INDEX has 3 groups: International, National and Local. Pages that are within group and block pages are normal pages. TV Programme pages have the same meaning as block pages except that they should contain the information about the TV programme. Some VCRs are looking for the pages that are marked as TV Programme in the TOP structure to enable TEXT PROGRAMMING. Subtitle pages are pages where subtitles will be transmitted.

To create the TOP structure use the TOP command of the Teletext Data Generator.

TOP xxxB   will mark the page xxx as a block page

TOP xxxG   will mark the page xxx as a group page

TOP xxxP   will mark the page xxx as a TV Programme page

TOP xxxS   will mark the page xxx as a subtitle page

TOP xxxR   will mark the page xxx as a (running) subtitle page

TOP xxxN   will mark the page xxx as a normal page

TOP 100   will display the TOP structure starting with page 100

When the teletext viewer has a teletext decoder that supports the TOP system, he can easily browse through the pages that are in the TOP structure by only pressing 2 coloured buttons on the remote control.

Depending on the current page number in the bottom line of the TV screen the name of the next block page will be displayed in the cyan colour and the name of the next group page will be displayed in yellow colour. By pressing the cyan or yellow button on the remote control, the teletext decoder jumps to the page that is the start of the next block or group. The way how the block and group pages are displayed depends on the teletext decoder in the TV set. The remote control should also have a button that will display a menu with available subtitle or TV Programme pages and select one of them.

The TOP structure is normally transmitted on pages 1F0, 1F1, 1F2 and following (if more than 3 are required). The page 1F0 is the BASIC TOP TABLE. It contains information about which pages are currently transmitted allowing the teletext decoder to notice the viewer that he selected a page that is not in transmission. There is also information about the TOP structure (block / group pages) and the page numbers where the MULTIPAGE TOP TABLE and the ADDITIONAL TOP TABLE can be found.

The page 1F1 is the MULTIPAGE TOP TABLE. It contains information on the number of subpages of all pages that are in transmission. The pages 1F2 and following are the ADDITIONAL TOP TABLES. They contain the names of all pages that are not specified as normal in the TOP structure.

For more information on the TOP system and for exact TOP specification you should contact IRT München.

Animated Clock

The FAB Teletext Data Generator supports a world-wide unique feature of animated clock. This feature enables displaying animated messages in the header row where normally the clock is displayed.

To be able to define the text and scrolling modes for the text that will be displayed instead of the clock you will have to use the "FAB Clock Editor" software for Windows 95 and Windows NT which is supplied as part of the FAB Teletext Editor for Windows FT-ETTWIN.

The FAB Clock Editor enables creation of a script for the animated clock. The best way to find out what are the possibilities is to load a demo clock file (click on the Open button) and see the possibilities which are available. In the left upper corner the preview of the current animated clock is displayed.
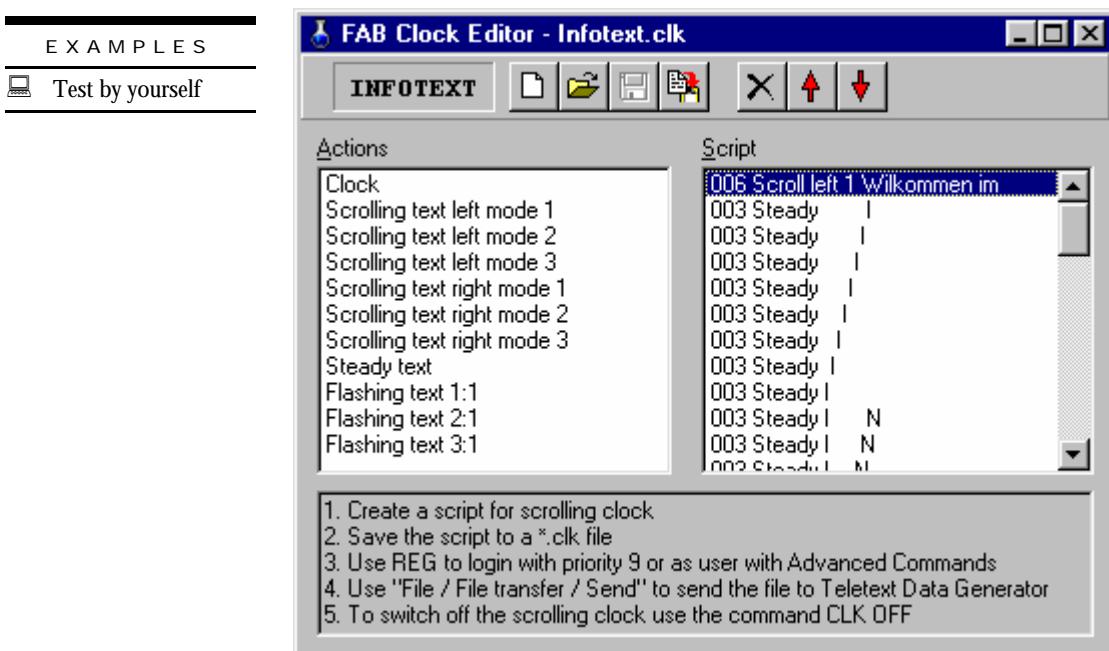
The left list displays the available animation effects. To build additional effects use the "Steady text" effects and enter each part of the text that should be displayed.

Animated clock sequences are stored in *.clk files. To start the transmission of the created animated clock use the FAB Teletext Editor for Windows FT-ETTWIN. First use the command REG to login either with priority 9 or with any password that has "Advanced commands" enabled. The select the option File / File transfer / Send from the menu and send the *.clk file to the FAB Teletext Data Generator.

To switch off the animated clock and to display the normal clock use the command CLK OFF.

Automatic Subpage Numbering

The FAB Teletext Data Generator will automatically put the subpage number onto all subpages of each page that consists of more than 1 subpage. In case that a page consists of 5 subpages on the 3rd subpage the text 3/5 will be displayed.

There are two ways how this can be done:

- In the CONFIG program for configuration of teletext it is possible to define the X and Y co-ordinates of the position on the teletext page where the actual subpage number should be displayed. You will find this setting in Advanced / Transmission / Settings valid for all magazines / Subpage numbering. This setting is valid for all pages that consist of more than one subpage. You can also change this setting with the command CFG SBP SET.

- To be able to override the position where the subpage/total numbers will be displayed on a single page it is possible to put the following sequence of characters onto the position where this should be displayed:

  <Conceal><Conceal>SN<Alphanumerics colour>

- Please note that exactly these 5 characters (you can use any control character for the colour) have to be entered into the page and only in this case the text will be substituted by the subpage number.
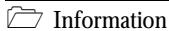
You should however be aware of the fact that the subpage numbering will only be activated when the page consists of less than 100 subpages, otherwise no automatic subpage numbering will occur.

Using Subcodes for Subpages

In Teletext each page carries a page number and also a subpage number. The page number can be a number from 100 to 899, but also hexadecimal numbers are allowed like 10A, 2A0, 3FE and similar. In total there are 2048 page numbers available, that is 800 decimal page numbers from 100 to 899 and additional 1248 hexadecimal page numbers.

Each page can consist of more subpages. Normally the Teletext Data Generator will define the subcode for each subpage automatically. In case that a page consist of one subpage only the page will be assigned the subcode 0. In case that a page consists of more than one subpage each subpage will be assigned a different subcode. The first one will get the subcode 1, the second one 2, the 10th will get the number 16 decimal (which is 10 hex and not 0A hex which could be expected).

To be able to define an individual subcode for each subpage special syntax has been added for the commands PUT and INS.

PUT XXX-Sssss   Stores the page on the screen as page XXX, overwriting the previous page XXX. The page will be transmitted with the subcode ssss when put into transmission.

INS XXX-Sssss   Stores the page on the screen as page XXX, overwriting the previous page XXX and puts the page into transmission. The page will be transmitted with the subcode ssss.

The parameter -Sssss where ssss is the subcode (a hexadecimal number between 0 and 3F7F, which means that for example the subcode 80 is invalid) is allowed in any available syntax of the commands PUT and INS.

Remember however that when the page is read with the command GET you will not get the subcode of the page. To store the page back with the same subcode you need to specify the parameter -Sssss again.

PUT 123.01-S1E   Stores the page as subpage 1 of the page 123 with the subcode 001E hexadecimal.

INS 279.03-S3E7F   Stores the page as subpage 3 of the page 279 with the subcode 3E7F hexadecimal and puts the page 279 into transmission.

Working with Real Subcodes

A special mode for working with subpages has been introduced to enable using fixed subcodes for subpages. In this mode it is possible to address each subpage with its real subcode number.

This mode is supported when using additional syntax which is available for commands PUT, INS and DEL.

PUT XXXRSssss	Stores the page on the screen as page XXX with subcode ssss. If the page XXX consists of one or more subpages then all existing subpages of the page XXX are first searched for the subpage with the subcode ssss. If the subpage with this subcode exists, it is overwritten. If the subpage with subcode ssss does not exist then the page is stored as a new subpage in the correct order of subcodes.
INS XXXRSssss	Stores the page on the screen as page XXX with subcode ssss and puts the page into transmission. If the page XXX consists of one or more subpages then all existing subpages of the page XXX are first searched for the subpage with the subcode ssss. If the subpage with this subcode exists, it is overwritten. If the subpage with subcode ssss does not exist then the page is stored as a new subpage in the correct order of subcodes.
DEL XXXRSssss	Deletes the subpage with the subcode ssss of the page XXX. The page XXX is first searched for the subpage with the subcode ssss and if found the subpage is deleted.

PUT 123RS1E	Stores the page as a new subpage of the page 123 with the subcode 001E hexadecimal. If any subpage of the page 123 already had the subcode 1E it will be overwritten.
INS 279RS3E7F	Stores the page as a new subpage of the page 279 with the subcode 3E7F hexadecimal and puts the page 279 into transmission. If any subpage of the page 279 already had the subcode 3E7F it will be overwritten.

File System

The File System of the FAB Teletext Data Generator
FT-DGS 2.5 Series

The FAB Teletext Data Generator implements a similar directory structure as known from DOS. There is a possibility to create directories, store teletext pages into them and read the stored pages from the directories.

The following commands are used to maintain the directory structure:

MKD   creates a directory

RMD   removes a directory

CHD   changes the current directory

DRI   displays the directory information

DRU   updates the directory information

The following commands also operate on the directories in addition to their normal functions:

PUT   stores a page in the directory

GET   reads a page from the directory

DEL   deletes a page in the directory

It is important to know that instead of using the character \ to identify a directory like in DOS the character / must be used on the FAB Teletext Data Generator. The directory name can be up to 8 characters long. Use the command DRI to display the information about the current directory. The information displayed will be:

Directory: /directory

Owner: Owner Usercode

Read Priorities: Priorities allowed to read directory

Write Priorities: Priorities allowed to write directory

The field Directory: displays the name of the current directory.

The field Owner: displays the usercode of the owner of the directory. The owner of the directory can either be None or any available usercode. The owner is allowed to read and write the directory independent of his priority.

The field Read Priorities: displays the priorities that are allowed to read the directory. All users having one of these priorities are allowed to read the directory. In addition priorities 0 (Console) and 9 (Sysop) are allowed to read all directories.

The field Write Priorities: displays the priorities that are allowed to write the directory. All users having one of these priorities are allowed to write the directory. In addition priorities 0 (Console) and 9 (Sysop) are allowed to write all directories.

Normally the root directory / has no owner and no write priorities are defined. This means that only Sysop and Console priorities can write the root directory /.

Writing directory actually means writing teletext pages to a directory, deleting pages from a directory and creating a subdirectory within a directory. So normally the Sysop or Console will create some subdirectories within the root directory. The directory structure should normally look something like this (please note that the directory name can be up to 8 characters long):
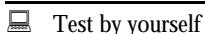
```
/NEWS/NATIONAL/

      /INTERNAT/

      /LOCAL/

/SPORTS/NATIONAL/

        /INTERNAT/

        /LOCAL/

/WEATHER/

/PETER/OLD/

      /PRIVATE/

/USER2/HISDATA/

       /PRIVATE/
```

To create the directory structure you can use the following commands (appropriate for your needs):

MKD /NEWS

MKD /NEWS/NATIONAL

MKD /NEWS/INTERNAT

MKD /SPORTS

CHD /SPORTS

MKD NATIONAL

MKD INTERNAT

MKD LOCAL

MKD /PETER

MKD /PETER/PRIVATE

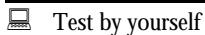When a new directory is created by using the command MKD the Owner, Read and Write Priorities are copied from the current directory. This means that after you have created a directory you should move to that directory by using the command CHD and use the commands DRI and DRU to set the desired Owner, Read and Write Priorities. In the above example of the directory structure the directories /NEWS, /NEWS/NATIONAL, /SPORTS,... should have read and write priorities 1 to 6. The directories that belong to one user (/PETER, /USER2) should have as Owner the usercode of the user and no read and write priorities to enable access to the directories to the Owner only (and of course the Sysop and Console priorities).

By using the command USR the Sysop and Console priorities can change the initial data of each user. In addition to the normal data (password,...) also the initial directory of the user can be set. So in the above example the initial directory of the user PETER can be /PETER or maybe /NEWS. The user is automatically placed into the initial directory after registering by the REG command. After that the user can still move to another directory by using the command CHD, which changes the current directory.

The commands PUT, GET and DEL normally expect a page number as a parameter. If the parameter can not be interpreted as a number, the parameter is interpreted as the page name. This page name will be then stored, loaded or deleted from the disk depending on the command. The page name can also consist of 8 characters most and must not start with a digit. So using the command PUT 1PETER will produce an error instead of saving a page to disk.

If your current directory is /SPORTS and you use the command PUT GOLF1 the page will be stored in the directory /SPORTS with the name GOLF1. The page can be retrieved by using the command GET GOLF1.

The directory can be displayed by using the command DRI. All pages that are stored in that directory will be displayed.

If your current directory is /SPORTS and you would like to access a page from another directory you can always specify the directory path in front of the page name that should be accessed (the Read or Write Priorities of the specified directory must of course be appropriate to allow access to the pages), i.e. PUT /NEWS/LATEST or PUT NATIONAL/FORMULA1.

A teletext page that is stored in the file system is identical to normal teletext pages stored with page numbers. This means that a page in the file system can consist of more subpages, for example you can issue the command

PUT NATIONAL/FORMULA1.02 which will store the page that you have on the screen as the second subpage of page FORMULA1.

However you will find out that there is a problem with specifying a parameter within the command, for example you can issue the command PUT 102A which will append the page that you have on the screen as the last subpage of the page 102. However if you would specify the parameter A to a name of the page within the file system, the system can not know that the character A is a parameter and is not part of the name of the page (i.e. PUT PETERA). Therefore you can use a fullstop "." character to define a parameter. So to append a new subpage to page PETER you would use the command PUT PETER.A and to insert a subpage you can use the command PUT PETER.02I.

Generally in all commands you can always use the character "." to specify that the following character is a parameter. Therefore all following command forms are valid:
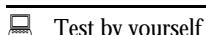
INS 102A

INS 102.A

INS 102.02I

INS 102.02.I

Please note that you can use pages from the file system in all commands. Therefore you can for example copy a page from the file system onto a normal page number. Following are examples of some commands where pages from the file system are used:

GET /TEST/PETER

COP /NEWS/MAIN 111D

MOV /NEWS/MAIN /NEWS/MAINOLD

Linked Pages in File System

The file system also has the ability to store links to page numbers in each directory. As each link has a name the links make it possible to access pages by names without having actually to know the page and subpage number of the page.

Links

A link is an object that behaves exactly like a normal teletext page. It is possible to read a link, write it and also delete it. As already mentioned a link is actually only a reference to a page number (including subpage number). So each operation on the link is actually an operation on the linked page (subpage). You can link a complete page including all of ist subpages or only one subpage of a page. A link is always stored in a certain directory of the file system. Please note that if you link a page and any user has access to the directory where the link is stored, he can use the page also if the page number to which the link is linked is not accessible for his usercode and password (see command USR).

The following commands have been added to enable using the updated file system:

LNK   creates a new link

UNL   removes a link

The following commands have been updated to enable more efficient use of the updated file system:

PUT and INS enable creation of a link without using LNK command

GET and DEL   support reading and deleting of linked pages

Creating Links

Links can be created by using the commands LNK, PUT or INS. A link is a well defined reference to a subpage of a page. So when creating a link normally you would specify a subpage of the page or only a page that the link should be pointing to and the name of the link that should be created.

LNK 111.02   /NEWS/LATEST2

This command will create a link with the name LATEST2 in the directory /NEWS. If the current directory is /NEWS then /NEWS/ can be left out in the command. Using the command DRI /NEWS will display the directory information of the directory /NEWS. You will be able to see that a link with the name /NEWS is pointing to page 111.02. Now try executing GET /NEWS/LATEST2. You will get the page 111.02 on your screen. This is the way how to access pages without having to know their page and subpage number.

The other possibility to create a link is to create it already when issuing the PUT or INS command.

INS 443.02 /COMMER/AUTO2

This command will insert the page 143.02 and immediately create a link with the name AUTO2 in the directory /COMMER. Executing the command GET /COMMER/AUTO2 will the display the page 443.02.

The same syntax is also allowed when using the PUT command

PUT 443.07 /COMMER/AUTO3

However you can also link a complete page including all of its subpages:

LNK 112 /NEWS/LOCAL

This command will link the page 112 to the name LOCAL in the directory /NEWS. This means that if the page 112 consists of 5 subpages then you can use the command GET /NEWS/LOCAL.03 to read the third subpage or the page 112.

Removing Links

Links can be removed either by using the UNL or DEL command. The command UNL will only delete the link whereas the command DEL will delete the page that is linked and also the link.

UNL /NEWS/LATEST2

This command will only delete the link LATEST2 in the directory /NEWS. The page that was linked with the link (i.e. 111.02) will not be affected and will also not be deleted.

DEL /NEWS/LATEST2

This command will delete the page that was linked with the link LATEST2 in the directory /NEWS (i.e. 111.02 or 111). However there is a difference in the behaviour of the link when the link LATEST2 is linked to one subpage only or when it is linked to a complete page.

When the link is linked to one subpage only the link is erased as the subpage does not exist any more after it was deleted by the command DEL.

When the link is linked to a complete page with all subpages, the command DEL will delete the linked page but it will not delete the link. The only way to delete the link is to use the command UNL.

Links Behaviour

Links are normally references to a fixed subpage of a page. Normally a problem would occur if a subpage lower than the linked subpage was

deleted because the linked subpage would be moved one subpage number lower.

The updated file system intercepts all subpages that are erased and recovers the links as required, which means that the link is actually always pointing to the same page (contents) and not to the same subpage number.

LNK 143.07 /NEWS/TEST1

DEL 143.02

After executing the above commands issue the command DRI. You will notice that the link TEST1 in the directory /NEWS is pointing to page 143.06.

Accessing Links

As already mentioned links behave exactly the same as normal pages that have been stored in directories. This means that the commands GET, PUT and DEL that operate on links actually operate on the linked pages.

GET /NEWS/LATEST2

This command will display the page 111.02 because the link LATEST2 in the directory /NEWS is pointing to page 111.02.

DEL /COMMER/AUTO2

This command will delete the page 443.02 as the link AUTO2 in the directory COMMER is pointing to page 443.02. As the link has no page to point to any more, the link AUTO2 is erased as well.

Command Reference for Links

LNK
The command LNK is used to create a link.

LNK XXX name   (Links page XXX with all subpages to name)

LNK XXX.XX name (Links subpage XX of the page XXX to name)

LNK 176 TEST   (Links page 176 with all subpages to the link with the name TEST in the current directory)

LNK 342.33 /COMMER/AUTO   (Links subpage 33 of the page 342 to the link with the name AUTO in the directory /COMMER)

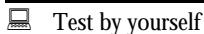### UNL

The command UNL is used to remove a link.

UNL name   (Removes a link with the name name)

UNL TEST   (Removes the link with the name TEST in the current directory)

UNL /COMMER/AUTO   (Removes the link with the name AUTO in the directory /COMMER)

PUT

The command PUT is used to store a page to the Data Generator´s hard disk. A link can be created immediatelly.

PUT name   (Stores the page on the screen as page with the name name. If name is a link then the page is stored to the linked page)

PUT XXX name   (Stores the page on the screen as page XXX. A link with the name name is created to subpage 1 of page XXX)

PUT XXX.XX name   (Stores the page on the screen as subpage XX of the page XXX. A link with the name name is created to subpage XX of the page XXX)

PUT /COMMER/AUTO   (Stores the page on the screen as page with the name AUTO in the directory /COMMER. If the name AUTO is a link then the page is stored to the linked page)

PUT 128 /NEWS/NNN   (Stores the page on the screen as subpage 01 of the page 128. Page 128 must have 0 or 1 subpages before this command is executed. A link with the name NNN pointing to subpage 01 of page 128 is created in the directory /NEWS)

PUT 128.04i /NEWS/NNN   (Stores the page on the screen as subpage 04 of the page 128. All subpages of the page 128 will be moved one up - subpage 4 will become subpage 5,... In addition a link with the name NNN pointing to subpage 04 of page 128 is created in the directory /NEWS)

INS

The command INS is used to store a page to the Data Generator´s hard disk and to start transmitting it immediately. A link can be created immediately.

INS name   (Stores the page on the screen as page with the name name which must be a link. The page also starts being transmitted)

INS XXX name   (Stores the page on the screen as page XXX and starts ist transmission. A link with the name name is created to subpage 1 of page XXX)

INS XXX.XX name   (Stores the page on the screen as subpage XX of the page XXX and starts its transmission. A link with the name name is created to subpage XX of the page XXX)

INS /COMMER/AUTO   (Stores the page on the screen as page with the name AUTO in the directory /COMMER. The name AUTO must be a link and the page is stored to the linked page which also starts being transmitted)

INS 128 /NEWS/NNN   (Stores the page on the screen as subpage 01 of the page 128 and starts transmitting the page. Page 128 must have 0 or 1 subpages before this command is executed. A link with the name NNN pointing to subpage 01 of page 128 is created in the directory /NEWS)

INS 128.04i /NEWS/NNN   (Stores the page on the screen as subpage 04 of the page 128 and starts transmitting the page. All subpages of the page 128 will be moved one up - subpage 4 will become subpage 5,... In addition a link with the name NNN pointing to subpage 04 of page 128 is created in the directory /NEWS)

GET

The command GET is used to read a page from the Data Generator´s hard disk.

GET name   (Reads a page with the name name from the disk of the Data Generator. If the name is a link then the linked page is read)

GET /COMMER/AUTO   (Reads the page with the name AUTO in the directory /COMMER. If the name AUTO is a link then the linked page is read)

DEL

The command DEL is used to delete a page from the Data Generator´s hard disk.

DEL name (Deletest a page with the name name from the disk of the Data Generator. If the name is a link to a certain subpage of a page then the linked page is deleted)

DEL /COMMER/AUTO (Deletes the page with the name AUTO in the directory /COMMER. If the name AUTO is a link then the linked page is deleted)

Mask Pages

The Mask Pages of the FAB Teletext Data Generator
FT-DGS 2.5 Series

The Teletext Data Generator is capable of storing mask pages with page numbers 100 to 8FF. Each mask page can consist of up to 8000 subpages.

The mask pages are used to add information (lines) to regular teletext pages. Each regular page will be changed according to the following procedure before being transmitted:

- Each subpage of a regular page will be read and lines which are contained   on the mask page with the same page and subpage number will be added to the regular page. By this procedure it is possible that some lines of the regular page will be overwritten.

- If the mask page contains less subpages than the regular page then the first subpage of the regular page that is higher than the highest mask subpage will be combined again with the first subpage of the mask page. The second subpage of the regular page without the corresponding mask subpage will be combined with the second mask subpage and so on.

- If the teletext page consists of a single subpage and the mask page consists of more subpages then each subpage of the mask page will be combined with the first (and only) subpage of the teletext page.

- If the mask page contains more subpages than the regular page then the page resulting from the combination of the mask and regular subpages will contain the same number of the subpages as the regular page. All higher subpages of the mask page will be ignored.

The Teletext Data Generator is storing the mask pages separated from the regular pages. They are combined right before the regular page is actually been put into transmission.

The mask pages allow using one teletext page by two users where each user can use only some lines of the teletext page. One user should store information into the teletext page and the other one should store

information into the mask page. The transmitted page will be combined before being put into transmission.

Please note that the regular teletext page is used as the base page and the mask page is being overlaid. This means that the page display time as well as the header bits are taken from the base page.

Transmission of Mask Pages

Commands for transmission of mask pages are used to transfer mask pages to the Teletext Data Generator and also to read them..

GEM (Get Mask)

This command is used to read a mask page from the Teletext Data Generator.

The syntax is identical to the command GET, except that a mask page is read instead of a regular page.

PUM (Put Mask)

This command is used to store a mask page in the Teletext Data Generator. If the regular page with the same number is currently being transmitted then it will be updated with the new information immediately.

The syntax is identical to the command PUT, except that a mask page is stored instead of a regular page.

INM (Insert Mask)

This command is used to store a mask page in the Teletext Data Generator and to put the regular page with the same page number into transmission.

The syntax is identical to the command INS, except that a mask page is stored instead of a regular page.

Handling of Mask Pages

Commands for handling of mask pages are used to copy, move or delete mask pages. Please note that all changes caused by these commands are immediately put into transmission if the regular page has been in transmission when the commands were executed.

TRM (Truncate Mask)

This command is used to truncate the number of subpages of a mask page that is stored in the Teletext Data Generator.

The syntax is identical to the command TRU, except that a mask page is truncated instead of a regular page.

DEM (Delete Mask)

This command is used to delete a mask page or a subpage of a mask page that is stored in the Teletext Data Generator.

The syntax is identical to the command DEL, except that a mask page is deleted instead of a regular page.

COM (Copy Mask)

This command is used to copy a mask page or a subpage of a mask page to another mask page or subpage.

The syntax is identical to the command COP, except that a mask page is copied instead of a regular page.

MOM (Move Mask)

This command is used to move a mask page or a subpage of a mask page to another mask page or subpage.

The syntax is identical to the command MOV, except that a mask page is moved instead of a regular page.

DIM (Directory of Masks)

This command is used to display the list of all mask pages that are stored in the Teletext Data Generator.

The syntax is identical to the command DIR, except that a list of mask pages is displayed.

Menu Operation

The Menu Operation of the FAB Teletext Data Generator
FT-DGS 2.5 Series

A menu structure has been implemented into the system to be able to influence transmission of teletext pages on the Teletext Data Generator directly instead from an editing terminal. The menu can be accessed by typing UTIL (start Utilities) and selecting "5 - Disk Functions Menu". To make the system display the menu automatically after the transmission software is started select the "Display Mode" in the configuration program.

In the menu use the arrow keys to highlight an item. Press ENTER to select the highlighted item and press ESC to go back to previous menu without selecting the highlighted item.

Run Page

Selecting this menu item enables you to put a page into transmission that is stored on the hard disk. You can select the page number of the page. This command is identical to the command RUN when executed from an editing terminal.

Stop Page

Selecting this menu item enables you to remove a page (including all subpages) from transmission. You can select the page number of the page. This command corresponds to the command STO when executed from an editing terminal.

Delete Page

Selecting this menu item enables you to remove a page (including all subpages) from transmission and from disk. You can select the page number of the page. This command corresponds to the command DEL when executed from an editing terminal.

Transmission of PDC
Data

The PDC Transmission of the FAB Teletext Data Generator
FT-DGS 2.5 Series

The FAB Teletext Data Generator supports transmission of PDC data. This data corresponds to the VPS Data which is transmitted in Germany for control of VCR recording. The Data Generator also enables decoding of VPS or PDC data and its retransmission as PDC data in packet 8/30/2.

Command Syntax for PDC

To configure the transmission of PDC you should use the CFG command (you must login with priority 9 to be able to use this command):

CFG PDC ON   Enables transmission of PDC data. Make sure to set the correct data using CNISET and SET commands.

CFG PDC OFF   Disables transmission of PDC data.

CFG PDC CNISET ccann   Defines the default static values for PDC transmission. Sets the country code to cc, the area code to a and the network code to nn. Example for ARD: 1D101

CFG PDC SET da mo ho mi pt pc   Defines the dynamic PDC data that should be transmitted. All values are in integer format: da=day, mo=month, ho=hour, mi=minute, pt=Program type, pc=PCS. Example for no PDC label: CFG PDC SET 0 15 31 63 255 2

Make sure to read the PDC specification to find correct values for each PDC related command.

Following commands will enable online decoding of VPS signal and ist retransmission in PDC format:

CFG VPSPDC ON   Enables automatic decoding of VPS/PDC and retransmits the decoded data as PDC.

CFG VPSPDC OFF   Disables automatic decoding of VPS/PDC and its retransmission.

CFG VPSPDC VPS ccann   Enables the VPS -> PDC mode and sets the country code to cc, the area code to a and the network code to nn. Example for ARD: 1D101

CFG VPSPDC PDC ccann   Enables the PDC -> PDC mode and sets the country code to cc, the area code to a and the network code to nn. Example for ARD: 1D101

Error and OK Messages

*The Error and OK Messages of the FAB Teletext Data
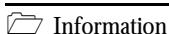Generator FT-DGS 2.5 Series*

MESSAGES

📁 Information
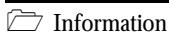
The following messages can occur when trying to execute a command from the Editing Terminal:

OK Messages

OK MESSAGES

📁 Information

OK	The command has been executed successfully.
OK-MSG-TYPE RMS	The command has been executed but there is a message waiting for you. Type RMS to read the message.
MORE-TYPE RMS	There is another message waiting. Type RMS to read it.
PAGE STOPPED	The STO command has been executed successfully.
PAGE TRUNCATED	The TRU command has been executed successfully.
PAGE TIMED	The TIM command has been executed successfully.
FAST OK	The FAS command has been executed successfully.
PAGE COPIED	The COP command has been executed successfully.
PAGE INSERTED	The INS command has been executed successfully.
PAGE RUN	The RUN command has been executed successfully.
PAGE GOT-ERASED	The RTR command has been executed successfully.
PASSWORD OK	The PAS command has been executed successfully.
PAGE DELETED	The DEL command has been executed successfully.
DIRECT ACC. OK	The DAC command has been executed successfully.
PAGE PUT	The PUT command has been executed successfully.
REGISTERED	The REG command has been executed successfully.

Error Messages

OFF LINE
The Data Generator is not ready to execute any commands. It is possibly still checking the pages after a restart. If this is not the case then the Data Generator is not running the Teletext Transmission Program any more. Reset the Teletext Data Generator.

E1-Can not RUN
The system memory is full and no more pages can be transmitted. Stop transmitting some of the pages (STO command) or install additional memory.

E2-Can not RUN
Not more than 4096 pages can be transmitted. Stop transmitting some of the pages.

E3-Already run.
Appears when using the TOP command and trying to define a page that is currently being transmitted as a subtitle page. Stop transmitting that page and reissue the command.

E5-No Help
Appears when issuing the HLP command with another command appended (i.e. HLP PETER) and there is no help available for that command.

E6-No message
Appears when using the RMS command and there is no message available.

E7-Not allowed
Appears when trying to access the pages you are not allowed to. This can be changed by the system operator in the password list.

E8-DISK FULL
Appears when trying to store a page to the Data Generator´s hard disk and there is no space for it.

E11-Bad pgno
Appears when the page number is not specified correctly.

E12-Bad spg
Appears when the subpage number is not specified correctly.

E13-Bad cmd
Appears when the command specified does not exist or can not be used before you register or your priority is not high enough to be able to use it.

E14-Bad user cd
Appears when using the UCD command and the user code is not specified correctly.

E15-No user
Appears when using the UCD command and no user has the specified user code.

E16-Bad STO
Appears when trying to stop transmitting a single subpage of a page. This is not possible. Only the whole page can be stopped.

E17-Not On Air
Appears when trying to stop transmitting a page that is currently not being transmitted.

E18-Can not STO
Appears when trying to stop transmitting the only page that is currently being transmitted. This is not possible. At any time at least one page has to be transmitted.

E21-No spg spec
Appears when issuing the GET command without specifying the subpage of the page and the page consists of more than one subpages. Use the GET XXX.XX command.

E22-Spg n.ex.
Appears when trying to GET a subpage that does not exist.

E23-Page n.ex.	Appears when trying to GET a page that does not exist.
E24-No more pgs	Appears when issuing the GET or GET . command and there are no more pages on the disk.
E25-Wrt.Protect	Appears when trying to write a page that is write protected by the command WPR.
E26-Spg too big	Appears when using the TIM XXX.XX YY command and the subpage XX does not exist.
E27-Bad Time	Appears when using the TIM command and trying to define the display time of a page that is shorter than 3 seconds or longer than 60 seconds. The display time of the page can only be between 3 and 60 seconds.
E28-Page n.ex.	Appears when using the TIM command and the specified page does not exist.
E31-Already fas	Appears when trying to define a page as fast rotating by using the FAS command and the page is already in the list of fast rotating pages.
E32-Not fast	Appears when trying to remove the page from the list of fast rotating pages by the FAS command and the page is not in the list.
E33-Bad param	Appears when trying to use a command with a parameter without any function (i.e. FAS 100p).
E34-Too man.fas	Appears when trying to add a page to the list of fast rotating pages and there are already 16 pages in the list of fast rotating pages. Not more than 16 pages can be selected as fast rotating.
E35-Bad Syspgno	Appears when using the TMC command and the contents of the page is not OK.
E41-Bad dst pgn	Appears when trying to copy a page. The destination page number is not correct.
E42-Src pg.n.ex	Appears when trying to copy a page and the source page does not exist.
E43-Dst pg ex.	Appears when trying to copy a page and the destination page exists. It can only be overwritten by specifying the D parameter. See COP command.
E44-Bad suffix	Appears when trying to copy a page and the parameter specified does not have any function.
E45-Too man spg	Appears when trying to append a page to another page and the destination page number would consist of more than 8191 subpages after the command would be executed. The page can consist of a maximum of 8191 subpages.
E46-Can not rot	Appears when trying to make the Alarm Clock Page rotating by using the COP command. The Alarm Clock Page can not consist of more than one subpage.
E47-Bad src pgn	Appears when trying to copy a page. The source page number is not correct.
E48-Can not run	Appears when trying to start transmitting the page by using the INS command and the page can not be transmitted because the

	magazine it is stored in can not be transmitted or you can not access the page. Only the system operator can change this.
E51-Page n.ex.	Appears when trying to start transmitting the page by using the RUN command. The specified page does not exist.
E52-Can not Run	Appears when trying to start transmitting the page by using the RUN command and the page can not be transmitted because the magazine it is in can not be transmitted or you can not access the page. Only the system operator can change this.
E53-Bad RUN	Appears when trying to start transmitting one subpage of a rotating page using the RUN command. This is not possible. Only the whole page can be transmitted.
E54-DISK ERROR	Appears when a disk error occurs during execution of a command on the Data Generator.
E55-Too man pag	Appears when trying to save a page by using the SAV command and there are already 115 pages saved on the Data Generator´s hard disk. It is not possible to save more than 115 pages to the Data Generator´s hard disk by using the SAV command.
E56-Page exists	Appears when trying to save a page by using the SAV command and a page with the same name is already saved on the Data Generator´s hard disk. Specify a different name.
E57-Page n.ex.	Appears when trying to retrieve a page by using the RTR command and the page with the specified name does not exist.
E58-Bad Name	Appears when using SAV or RTR commands and the name specified does not consist only of characters. Only characters "A" to "Z", "a" to "z" and digits can be used.
E62-Wrong Prio.	Appears when trying to execute a command that is not allowed to be executed with the current priority.
E63-REG FIRST !	Appears when trying to execute a command that requires the user to be registered and the user is not registered.
E64-Pass.not OK	Appears when using PAS or USR commands. Try specifying another password as not all passwords are allowed. Only characters "A" to "Z", "a" to "z" and digits can be used.
E65-Bad Data	Appears when using USR command. The data in the fields PRIORITY, LOWPAGE or HIGHPAGE is not correct.
E66-Bad Repeat	Appears when using PAS and USR commands. The password is not repeated correctly.
E67-Bad Passwrd	Appears when using PAS and USR commands. The password is not correct. Only characters "A" to "Z", "a" to "z" and digits can be used.
E68-Bad Name	Appears when using PAS and USR commands. The username is not correct. Only characters "A" to "Z", "a" to "z" and digits can be used.
E71-Spg not spc	Appears when trying to delete a page by using the DEL command and you specified a page with no subpage but that page consists of more than one subpage. Specify the subpage you want to delete.

E72-Spg n.ex.	Appears when trying to delete a subpage but the specified subpage does not exist.
E73-Page n.ex.	Appears when trying to delete a page but the specified page does not exist.
E74-Bad suffix	Appears when using the DEL command and specifying a parameter with no function.
E75-Already dac	Appears when trying to add a page to the list of direct access pages and the page is already in the list.
E76-Not d.acc.	Appears when trying to remove a page from the list of direct access pages and it is not in the list.
E78-Too man.dac	Appears when trying to add a page to the list of direct access pages but there are already 15 pages in the list. Not more than 15 pages can be in the list of direct access pages.
E81-Too man.spg	Appears when trying to append a subpage to a page by using the PUT or INS commands and the page already consists of 99 subpages. A page can not consist of more than 99 subpages.
E82-Too big spg	Appears when trying to store a page to the Data Generator´s hard disk by using the PUT or INS commands but the subpage specified is too high. The subpage specified can only be one higher than the number of subpages of the page.
E83-Page n.ex.	Appears when trying to store a subpage to the Data Generator´s hard disk and the specified page does not exist. Store the page without specifying the subpage.
E84-Can not rot	Appears when trying to make the Alarm Clock page rotating by using the PUT or INS commands. The Alarm Clock page can not consist of more than one subpage.
E85-Spg not spc	Appears when trying to store a page to the Data Generator´s hard disk by using the PUT or INS commands without specifying the subpage and the specified page consists of more than one subpage. Specify the subpage you want to store.
E86-Bad param	Appears when trying to specify a parameter with no function at any command.
E87-Not allowed	Appears when trying to access a page and the current priority and lowest and highest page setting will not allow it.
E88-Bad Date	Appears when specifying wrong date when using the SDT command.
E91-No more	Appears when using the ARC command and there are no more pages to be listed in the archive.
E93-Too big Idx	Appears when using the ARC XXXX command and the page with index XXXX does not exist in the archive.
E94-Bad Idx	Appears when using the ARC XXXX command and the index number is not correct.
E95-No Archive	Appears when trying to access the archive and there are no pages on the selected day in archive.

E96-No pass	Appears when trying to register by the REG command and the specified name and password are not in the password list. The password list can only be changed by the system operator.
E97-Bad table	Appears when trying to use the SHO command and the parameter specified is not 0, 1 or 2.
E104-Dir.n.fnd.	Appears when trying to access directory that does not exist.
E105-Dir.n.empt	Appears when trying to remove a directory with the command RMD and the directory is not empty.
E106-Acc.denied	Appears when trying to access a directory and the Read and ∕ or Write Priorities set for that directory will not allow it.
E107-Page ex.	Appears when trying to create a page in the directory with a name that already exists in the directory.
E108-Bad TDC	Appears when specifying a wrong decoder number when using the TDC command.